



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent Application No. 10/018,396

Applicant: Cho-Chung

Filed: March 20, 2002

TC/AU: 1642

Examiner: S.N. Ungar

Docket No.: 214616 (Client Reference No. E-110-1999/0-US-03)

Customer No.: 45733

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. § 1.132 OF  
YOON S. CHO-CHUNG, M.D., PH.D.**

I, Yoon S. Cho-Chung, do hereby declare:

1. I am the inventor of the subject matter disclosed and claimed in the referenced patent application.


2. The data generated below were generated under my supervision.

3. ECPKA activity levels were measured in a variety of cancer cells using the PKA assay disclosed in the subject application (see, e.g., Example 1). The results of this experiment are set forth in Exhibit A. Several different carcinoma cell types were tested, along with three sarcoma cell lines (see e.g., Exhibit A at pages 2 and 4). ECPKA activity was elevated in each sarcoma sample, as compared to the average ECPKA level of 12.2 mU/ml observed in normal cells.

4. I hereby declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United

States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 8-30-2005

  
Yoon S. Cho-Chung, M.D., Ph.D.

**From Dr. Susan Bates  
1-13-2000 (received)**

**Samples**

No	Samples	I.D.	(CPM)		Mean		Net	PKA		
			(-)	(+)	(-)	(+)			mU/ml	
99	adenocystic	M38502	1266	1020	512	542	1143	527	616	40.7
91	bladder	M37629	1613	1480	963	675	1547	819	728	48.0
123	breast adenocarcinoma	M40193	1504	1666	591	827	1585	709	876	57.8
76	cholangiocarcinoma	M36702	867	1011	557	533	939	545	394	26.0
20	colon	M32830	1488	1479	876	858	1484	867	617	40.7
32	colon	M33708	1356	1359	542	511	1358	527	831	54.9
37	colon	M34057	2194	1794	1391	1407	1994	1399	595	39.3
38	colon	M34119	1070	984	465	528	1027	497	531	35.0
41	colon	M34347	1165	1138	767	726	1152	747	405	26.7
51	colon	M35221	2167	2090	1060	1209	2129	1135	994	65.6
53	colon	M35236	1647	1671	768	699	1659	734	926	61.1
54	colon	M35362	1098	1332	734	898	1215	816	399	26.3
58	colon	M35615	2702	2960	493	720	2831	607	2225	146.9
59	colon	M35633	1446	1457	588	575	1452	582	870	57.4
63	colon	M35803	1960	2044	759	879	2002	819	1183	78.1
64	colon	M35929	1663	1477	694	777	1570	736	835	55.1
67	colon	M36078	1149	992	733	610	1071	672	399	26.3
69	colon	M36253	1393	1619	813	756	1506	785	722	47.6
74	colon	M36502	1506	1981	884	812	1744	848	896	59.1
75	colon	M36669	2091	1938	778	801	2015	790	1225	80.9
77	colon	M36734	1291	1768	845	823	1530	834	696	45.9
83	colon	M37133	1468	1451	749	734	1460	742	718	47.4
88	colon	M37506	1523	1825	554	543	1674	549	1126	74.3
98	colon	M38428	1779	1929	745	741	1854	743	1111	73.3
103	colon	M38696	1057	891	542	542	974	542	432	28.5
106	colon	M38925	2469	1989	754	865	2229	810	1420	93.7
109	colon	M39044	1386	1803	702	745	1595	724	871	57.5
116	colon	M39491	1757	1707	612	648	1732	630	1102	72.8
118	colon	M39752	1677	1487	703	714	1582	709	874	57.7
135	colon	M41110	1780	1369	465	668	1575	567	1008	66.5
137	colon	M41249	1932	1288	794	746	1610	770	840	55.5
135	colon	M41110	1780	1369	465	668	1575	567	1008	66.5
137	colon	M41249	1932	1288	794	746	1610	770	840	55.5
125	gastric adenocarcinoma	M40339	1245	1196	511	536	1221	524	697	46.0

12 hepatoblastoma	M31946	1326	1321	781	828	1324	805	519	34.3
52 hepatocellular	M35234	1591	1838	629	653	1715	641	1074	70.9
94 leiomyosarcoma	M37702	1543	1542	618	682	1543	650	893	58.9
31 liposarcoma	M33702	1773	1429	706	727	1601	717	885	58.4
1 lung	M27795	1639	1310	897	784	1475	841	634	41.9
10 lung	M31464	1749	1372	777	790	1561	784	777	51.3
46 lung	M34780	1784	1777	600	626	1781	613	1168	77.1
57 lung	M35511	1167	1464	777	822	1316	800	516	34.1
68 lung	M36155	1334	1401	713	739	1368	726	642	42.4
87 lung	M37434	2407	1803	837	983	2105	910	1195	78.9
62 lymphoma	M35760	1070	1450	745	644	1260	695	566	37.3
2 melanoma	M30538	1393	1652	830	732	1523	781	742	49.0
3 melanoma	M30625	2080	1720	840	923	1900	882	1019	67.2
4 melanoma	M30848	1319	1423	712	704	1371	708	663	43.8
6 melanoma	M31230	2109	1771	721	960	1940	841	1100	72.6
7 melanoma	M31342	1405	1232	687	730	1319	709	610	40.3
8 melanoma	M31360	1843	1601	864	838	1722	851	871	57.5
13 melanoma	M32115	1956	1766	899	844	1861	872	990	65.3
14 melanoma	M32142	1945	2041	950	1036	1993	993	1000	66.0
16 melanoma	M32170	1934	1532	789	706	1733	748	986	65.1
17 melanoma	M32235	1749	1415	783	727	1582	755	827	54.6
18 melanoma	M32448	2316	2362	1044	1028	2339	1036	1303	86.0
19 melanoma	M32535	1748	2322	1054	965	2035	1010	1026	67.7
22 melanoma	M32936	1518	1516	812	744	1517	778	739	48.8
23 melanoma	M32942	1490	1544	826	823	1517	825	693	45.7
24 melanoma	M33031	1338	1463	986	794	1401	890	511	33.7
25 melanoma	M33090	1465	1330	705	863	1398	784	614	40.5
26 melanoma	M33092	1667	1674	743	745	1671	744	927	61.2
27 melanoma	M33178	1916	1845	915	924	1881	920	961	63.4
34 melanoma	M33957	1418	1246	688	619	1332	654	679	44.8
35 melanoma	M33987	1633	1552	807	672	1593	740	853	56.3
40 melanoma	M34338	1753	1610	822	764	1682	793	889	58.7
44 melanoma	M34710	1748	1818	685	779	1783	732	1051	69.4
48 melanoma	M34977	1432	1772	679	618	1602	649	954	62.9
50 melanoma	M35027	1284	1100	701	837	1192	769	423	27.9
56 melanoma	M35482	1269	1166	559	820	1218	690	528	34.9
65 melanoma	M36042	1518	1474	783	892	1496	838	659	43.5
71 melanoma	M36363	1332	1653	925	1003	1493	964	529	34.9
80 melanoma	M36963	1500	1595	731	890	1548	811	737	48.7
82 melanoma	M37072	1717	1714	912	857	1716	885	831	54.9

90 melanoma	M37621	1906	2097	927	1068	2002	998	1004	66.3
92 melanoma	M37649	1588	1309	734	963	1449	849	600	39.6
95 melanoma	M37877	921	1157	462	521	1039	492	548	36.1
96 melanoma	M38072	1168	1330	926	711	1249	819	431	28.4
105 melanoma	M38706	1473	1227	512	542	1350	527	823	54.3
107 melanoma	M38940	1354	1616	645	685	1485	665	820	54.1
108 melanoma	M38978	1999	2301	765	812	2150	789	1362	89.9
112 melanoma	M39083	1404	1474	712	732	1439	722	717	47.3
115 melanoma	M39412	2185	2010	912	942	2098	927	1171	77.3
126 melanoma	M40340	1490	1537	477	494	1514	486	1028	67.9
130 melanoma	M40898	2221	2034	643	760	2128	702	1426	94.1
134 melanoma	M41094	1212	1113	522	414	1163	468	695	45.9
136 melanoma	M41123	2233	2901	700	565	2567	633	1935	127.7
138 melanoma	M41360	1271	1134	593	475	1203	534	669	44.1
130 melanoma	M40898	2221	2034	643	760	2128	702	1426	94.1
134 melanoma	M41094	1212	1113	522	414	1163	468	695	45.9
136 melanoma	M41123	2233	2901	700	565	2567	633	1935	127.7
138 melanoma	M41360	1271	1134	593	475	1203	534	669	44.1
9 ovarian	M31393	1472	1595	902	754	1534	828	706	46.6
117 ovarian	M39616	1933	1352	645	614	1643	630	1013	66.9
124 ovarian adenocarcinoma	M40327	1562	1435	628	502	1499	565	934	61.6
11 pancreatic	M31787	1509	1578	724	713	1544	719	825	54.5
73 pancreatic	M36494	1462	1243	573	648	1353	611	742	49.0
86 pancreatic	M37418	1243	1137	809	632	1190	721	470	31.0
30 pancreatic	M33489	1916	1930	775	935	1923	855	1068	70.5
43 rectal	M34573	1302	1247	625	588	1275	607	668	44.1
47 rectal	M34868	1445	1196	685	634	1321	660	661	43.6
72 rectal	M36437	1537	1782	869	767	1660	818	842	55.6
89 rectal	M37576	1735	2126	940	827	1931	884	1047	69.1
139 rectal	M41374	876	856	495	424	866	460	407	26.8
139 rectal	M41374	876	856	495	424	866	460	407	26.8
5 renal cell carcinoma	M30974	1724	1990	687	911	1857	799	1058	69.8
21 renal cell carcinoma	M32912	1605	1422	745	747	1514	746	768	50.7
28 renal cell carcinoma	M33297	1590	1739	704	802	1665	753	912	60.2
29 renal cell carcinoma	M33403	1979	1897	768	789	1938	779	1160	76.5
33 renal cell carcinoma	M33927	1514	1708	759	658	1611	709	903	59.6
36 renal cell carcinoma	M33992	1867	1822	855	856	1845	856	989	65.3
39 renal cell carcinoma	M34219	1358	1535	738	637	1447	688	759	50.1
42 renal cell carcinoma	M34379	1647	1411	629	820	1529	725	805	53.1
45 renal cell carcinoma	M34749	1468	1885	872	779	1677	826	851	56.2

49 renal cell carcinoma	M35022	1885	1698	1001	936	1792	969	823	54.3
55 renal cell carcinoma	M35380	1745	1931	969	833	1838	901	937	61.9
60 renal cell carcinoma	M35658	2251	2426	791	746	2339	769	1570	103.7
61 renal cell carcinoma	M35713	1492	1546	888	955	1519	922	598	39.4
66 renal cell carcinoma	M36060	1488	1307	933	939	1398	936	462	30.5
70 renal cell carcinoma	M36330	2800	2483	867	749	2642	808	1834	121.0
78 renal cell carcinoma	M36787	1589	1540	904	756	1565	830	735	48.5
79 renal cell carcinoma	M36812	2011	1660	710	658	1836	684	1152	76.0
81 renal cell carcinoma	M37050	1519	1453	848	578	1486	713	773	51.0
84 renal cell carcinoma	M37274	1402	1177	742	512	1290	627	663	43.7
85 renal cell carcinoma	M37361	1317	1586	654	621	1452	638	814	53.7
93 renal cell carcinoma	M37660	1501	1665	660	799	1583	730	854	56.3
97 renal cell carcinoma	M38334	1582	1578	602	645	1580	624	957	63.1
100 renal cell carcinoma	M38564	1882	1560	621	645	1721	633	1088	71.8
101 renal cell carcinoma	M38585	1478	1206	542	561	1342	552	791	52.2
102 renal cell carcinoma	M38677	1807	1965	745	748	1886	747	1140	75.2
104 renal cell carcinoma	M38698	1279	1310	451	462	1295	457	838	55.3
110 renal cell carcinoma	M39059	2678	2550	856	912	2614	884	1730	114.2
111 renal cell carcinoma	M39067	1428	1343	645	668	1386	657	729	48.1
113 renal cell carcinoma	M39127	2038	1840	912	912	1939	912	1027	67.8
114 renal cell carcinoma	M39305	2125	2311	984	912	2218	948	1270	83.8
119 renal cell carcinoma	M39884	1639	1232	465	485	1436	475	961	63.4
120 renal cell carcinoma	M39921	1957	1799	703	712	1878	708	1171	77.3
121 renal cell carcinoma	M39939	1228	1145	642	728	1187	685	502	33.1
122 renal cell carcinoma	M40045	2018	1856	583	700	1937	642	1296	85.5
128 renal cell carcinoma	M40696	1554	1542	670	728	1548	699	849	56.1
129 renal cell carcinoma	M40705	1659	1671	620	637	1665	629	1037	68.4
132 renal cell carcinoma	M41054	1457	1502	499	564	1480	532	948	62.6
133 renal cell carcinoma	M41079	1133	1054	778	648	1094	713	381	25.1
140 renal cell carcinoma	M41421	2555	2659	795	691	2607	743	1864	123.1
129 renal cell carcinoma	M40705	1659	1671	620	637	1665	629	1037	68.4
132 renal cell carcinoma	M41054	1457	1502	499	564	1480	532	948	62.6
133 renal cell carcinoma	M41079	1133	1054	778	648	1094	713	381	25.1
140 renal cell carcinoma	M41421	2555	2659	795	691	2607	743	1864	123.1
127 sarcoma	M40404	1024	947	571	550	986	561	425	28.1
131 synorial cell	M40909	2073	2503	786	816	2288	801	1487	98.2
131 synorial cell	M40909	2073	2503	786	816	2288	801	1487	98.2
15 thymoma	M32165	1598	1512	945	806	1555	876	680	44.9